January 29, 1998

TEL:805-498-2111 FAX:805-498-3804 WEB:http://www.semtech.com

QUICK REFERENCE DATA

- V_R = 600 - 1000V
- I_F = 2.0A
- t_{rr} = 2.5µS
- I_R = 1.0µA

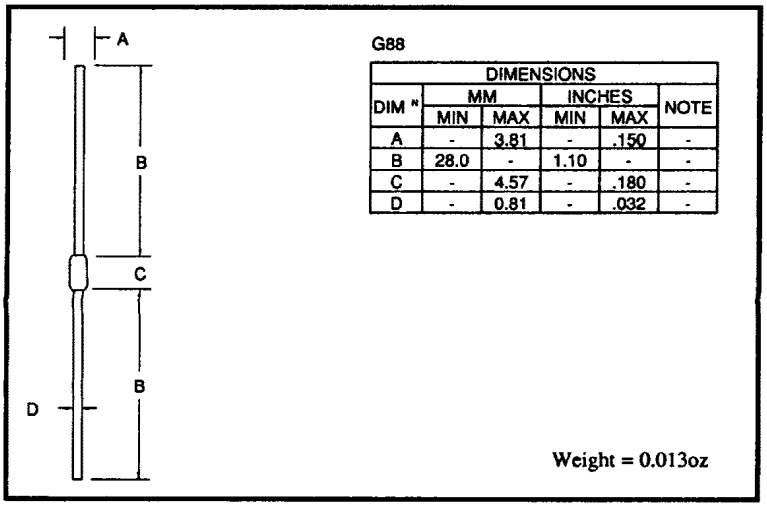
AXIAL LEADED HERMETICALLY SEALED STANDARD RECOVERY RECTIFIER DIODE

- Avalanche capability
- High thermal shock resistance
- Glass passivated for hermetic sealing
- Low reverse leakage currents
- Low forward voltage drop

ABSOLUTE MAXIMUM RATINGS (@ 25°C unless otherwise specified)

	Symbol	PM6	PM8	PM0	Unit
Working reverse voltage	V_{RWM}	600	800	1000	V
Repetitive reverse voltage	V_{RRM}	600	800	1000	V
Surge reverse voltage	V_{RSM}	650	900	1100	V
Average forward current (@ 55°C, lead length 0.375")	I_F	← 2.0 →			A
Repetitive surge current (@ 55°C in free air, lead length 0.375")	I_{FRM}	← 12.0 →			A
Non-repetitive surge current (t_p = 8.3mS, @ V_R & T_{jmax})	I_{FSM}	← 50 →			A
Storage temperature range	T_{stg}	← -65 to +175 →			°C
Operating temperature range	T_{oper}	← -65 to +175 →			°C

MECHANICAL



G88

DIM "	DIMENSIONS MM MIN	MM MAX	INCHES MIN	INCHES MAX	NOTE
A	-	3.81	-	.150	-
B	28.0	-	1.10	-	-
C	-	4.57	-	.180	-
D	-	0.81	-	.032	-

Weight = 0.013oz

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CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	PM6 PM8 PM0	Unit
Average forward current for sine wave - max. pcb mounted; T_A = 55°C - max. L = 3/8"; T_L = 55°C	 $I_{F(AV)}$ $I_{F(AV)}$	 1.1 2.0	 A A
I^2t for fusing (t = 8.3mS) max.	I^2t	12.0	A^2S
Forward voltage drop max. @ I_F = 1.00A, T_j = 25°C	V_F	1.0	V
Reverse current max. @ V_{RWM}, T_j = 25°C @ V_{RWM}, T_j = 100°C	 I_R I_R	 1.0 10	 µA µA
Reverse recovery time typ. 0.5A I_F to 1.0A I_R. Recovers to 0.25A I_{RR}.	t_{rr}	2.5	µS
Junction capacitance typ. @ V_R = 5V , f = 1MHz	C_j	20	pF
Thermal resistance - junction to lead Lead length = 0.375" Lead length = 0"	 $R_{\theta JL}$ $R_{\theta JL}$	 47 19	 °C/W °C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta JA}$	100	°C/W

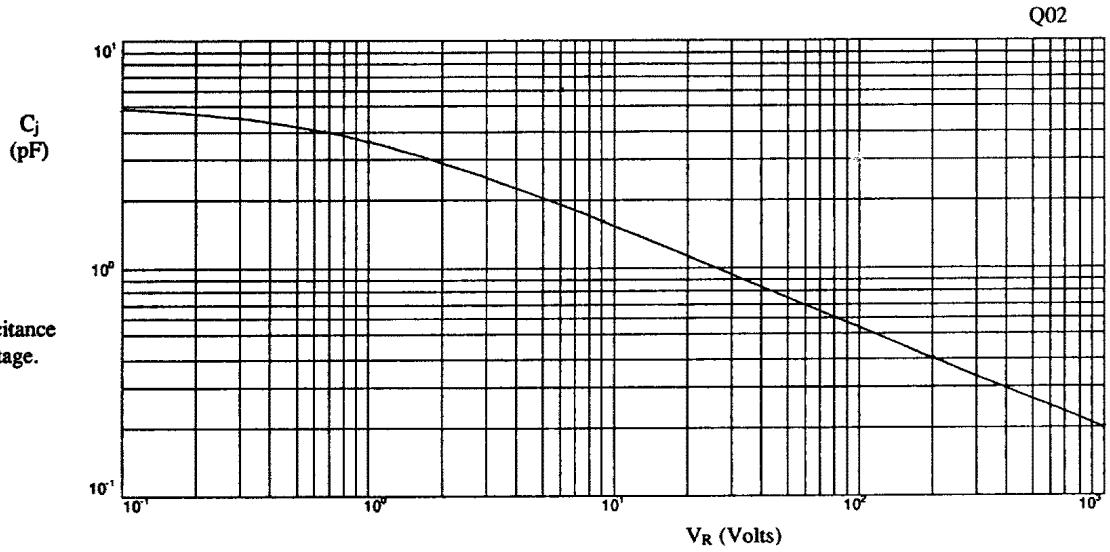

Fig 1. Junction capacitance against reverse voltage.

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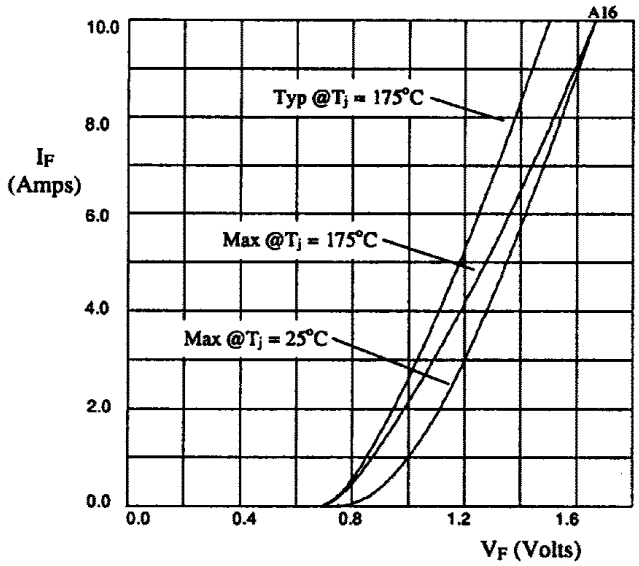

Fig 2. Forward voltage drop as a function of forward current.

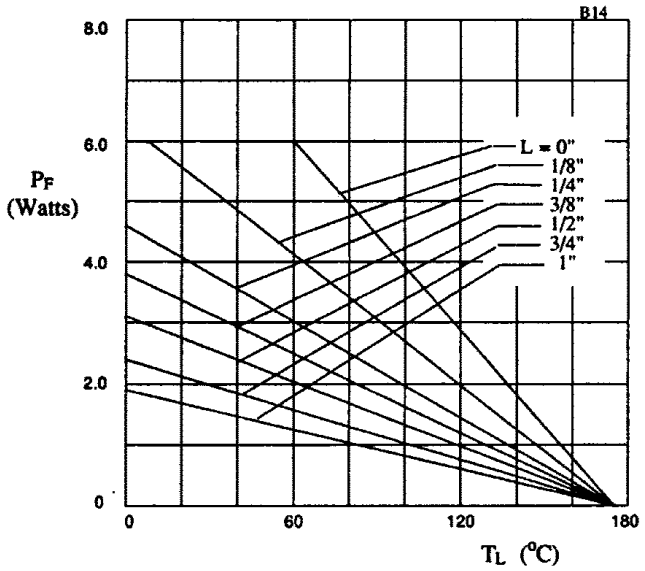

Fig 3. Maximum power versus lead temperature.

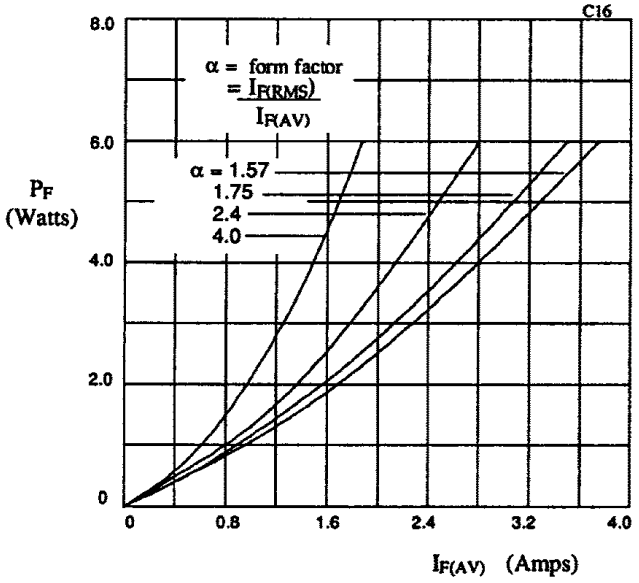

Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.

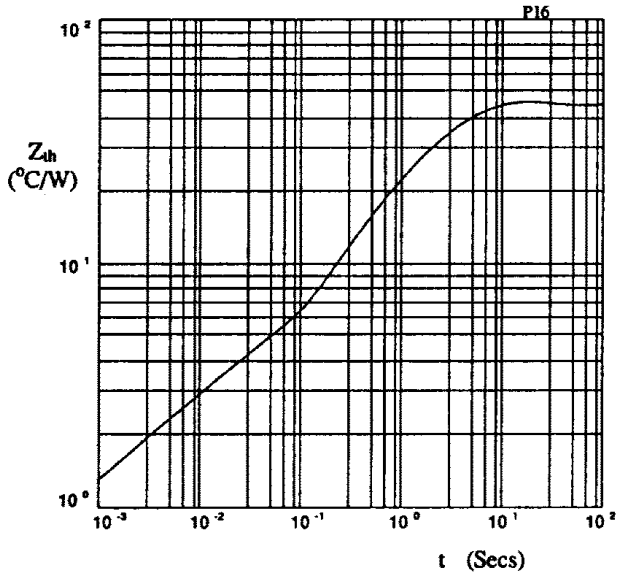

Fig 5. Transient thermal impedance characteristic.

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